

PRELIMINARY AMENDMENT  
Divisional of Application No. 09/706,818

**AMENDMENTS TO THE SPECIFICATION**

**Amend the specification by inserting before the first line the sentence:**

This is a divisional of Application No. 09/706,818 filed November 7, 2000; the disclosure of which is incorporated herein by reference.

**Please delete the paragraph bridging pages 1 and 2 and replace it with the following paragraph:**

As one of the plasma CVD apparatuses for forming a film on a substrate while restraining plasma damage, a remote-plasma CVD apparatus is known in which a plasma generation region and a substrate processing region are separated. A method of forming a CVD film using such a remote-plasma CVD apparatus is an important technology as the processing process to make a ~~high reliability~~highly reliable device and a highly efficient device in a semiconductor device process. The remote plasma CVD apparatuses can attain the large sized substrate processes such as a large area flat panel display switching transistor forming process, a drive circuit transistor forming process and a large diameter silicon wafer process. As such a remote plasma CVD apparatus, a parallel plate remote plasma CVD apparatus is disclosed in Japanese Laid Open Patent Application (JP-A-Heisei 5-21393). As shown in Fig. 1, the parallel plate remote plasma CVD apparatus is composed of a high frequency applied electrode 101 and a counter electrode 102 on which a substrate 103 is mounted. A plasma confining electrode 108 as a mesh plate having a plurality of holes is provided between the high frequency applied electrode 101 and the counter electrode 102. Plasma 106 is confined between the high frequency applied electrode 101 and the plasma confining electrode 108. Plasma generation gases 111 are introduced between

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the high frequency applied electrode 101 and the plasma confining electrode 108. The vacuum chamber 107 is provided with an exhaust port 116.

**Please delete the paragraph bridging pages 19 and 20 and replace it with the following paragraph.**

A silicon oxide film is formed by such a plasma CVD apparatus. As shown in Fig. 8, an oxygen gas 18 is introduced between the high frequency applied electrode 2 and the plasma confining electrodes 5 in the vacuum chamber 1. Then, the glow discharge is generated to generate oxygen plasma 22 in a plasma generation region. The generated oxygen plasma 22 is efficiently confined between the high frequency applied electrode 2 and the plasma confining electrode 5. As a result, the plasma density in the oxygen plasma 22 is about  $10^{10}/\text{cm}^3$ , while the plasma density between the plasma confining electrode 5 and the counter electrode ~~233~~ is  $10^5$  to  $10^6/\text{cm}^3$ . In this case, electrons, oxygen atom ions, oxygen molecule ions, oxygen atom radicals, and oxygen molecule radicals exist in the oxygen plasma. However, the electrons and ions going out of the plasma are ~~ignigible~~negligible. Therefore, the oxygen atom radicals and oxygen molecule radicals react with the mono-silane gas 19 ~~contributes and contribute~~ to the formation of the silicon oxide film through the reaction with the mono-silane gas 19. Hereinafter, these radicals are merely referred to as oxygen radicals. The oxygen radicals 21 pass through the radical passage holes 13 to ~~diffuses~~diffuse in the substrate processing region, and react with the mono-silane gas 19 which passes through the third neutral gas passage holes 16 to form the

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silicon oxide precursor such as SiO<sub>x</sub> and SiO<sub>x</sub>H<sub>y</sub>. Thus, the silicon oxide film is formed on the substrate 34.